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10/814,848	03/30/2004	Bruce Alan Fairman	SONY-27700	6497

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EXAMINER
CHU, WUTCHUNG

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>21 October 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-69</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-69</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>10/21/2007</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to application's amendment filed on

10/21/2007. Claims 1-69 are pending.

Priority

1.   Applicant's claim for domestic priority under 35 U.S. C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 103

2.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kanehara in view of Saito et al., hereinafter Saito, (US6523696).

Regarding claim 1, Kanehara discloses a Packet processing apparatus, and

packet processing method **(see paragraph 18 line 1-2)** comprising:

a.   packetizing one or more data streams into isochronous data packets **(see paragraph 56 line 1-3 and figure 1 box 102 IEEE1394 packet processor)**;

b.   encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet **(see paragraph 38, 56, and 72 line 1-7)**; and

c.   sending the real-time transport protocol data packets from a transmitting device to a receiving device **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated)**

Kanehara disclose all the subject matter of the claimed invention with the exception of:

- over a non-isochronous compliant network.

Saito the same or similar fields of endeavor teaches the use of public network such as internet, and the ATM network exists between them **(see Saito col. 12 lines 28-32 and col. 18 lines 50-55, and col. 19 line 64 ATM network)**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ATM network exists between transmitting and receiving terminals as taught by Saito in the packet processing apparatus, and packet processing method of Kanehara in order to provide connection for communication units for inter-connected networks **(see Saito col. 9 lines17-29)**.

Regarding claim 2, Kanehara teaches the transmitting device is coupled to a first isochronous compliant network and the receiving device is coupled to a second isochronous compliant network **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both transmitting and receiving devices couple to first and second isochronous compliant networks).**

Regarding claim 3, Kanehara teaches the first isochronous compliant network and the second isochronous compliant network each comprise an IEEE 1394 compliant bus architecture **(see figure 2 IEEE1394 bus).**

Regarding claim 4, Kanehara teaches the first isochronous compliant network and the second isochronous compliant network are coupled via the non-isochronous compliant network **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both first and second isochronous compliant networks are couple via a non-isochronous compliant network as it is capable in transmitting either in asynchronous or isochronous mode).**

Regarding claim 5, Kanehara teaches the non-isochronous compliant network comprises an Internet Protocol network **(see paragraph 32).**

Regarding claim 6, Kanehara teaches the Internet Protocol network comprises an Ethernet/Internet Protocol network **(see paragraph 32).**

Regarding claim 7, Kanehara teaches further comprising generating a cycle record **(see figure 7 box 710 time count)** for each isochronous cycle of the first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to the cycle master of the first isochronous compliant network **(see figure 7 box 707 offset)**.

Regarding claim 8, Kanehara teaches the real-time transport protocol defines a real-time transport protocol header **(see paragraph 77 line 12)** and a real-time transport protocol data payload **(see paragraph 101 line 3)** for each real-time transport protocol data packet **(see paragraph 38 and 40)**.

Regarding claim 9, Kanehara teaches the real-time transport protocol data payload comprises one or more isochronous cycle records **(see paragraph 79 line 4 value)**.

Regarding claim 10, Kanehara teaches each of the one or more isochronous cycle records comprises zero or more isochronous data packets **(see paragraph 83 line 6)**.

Regarding claim 11, Kanehara teaches each isochronous data packet comprises an IEEE 1394 isochronous data packet **(see paragraph 36 line 2)**.

Regarding claim 13, Kanehara teaches the real-time transport protocol header includes a timestamp, the timestamp is defined by a value of the isochronous cycle start

transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet **(see paragraph 79 line 9 packet flag value and figure 5 box 508 packet flag)**.

Regarding claim 14, Kanehara teaches each real-time transport protocol data packet includes at least a portion of an isochronous cycle record **(see figure 7 box 710 time count)**.

Regarding claim 15, Kanehara discloses a an apparatus for communicating data strasm, that apparatus **(see paragraph 27 line 1 and figure 2)** comprising:

a.   means for packetizing one or more data streams into isochronous data packets **(see paragraph 56 line 1-3 and figure 1 box 102 IEEE1394 packet processor)**;

b.   means for encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet **(see paragraph 38, 56, and 72 line 1-7)**; and

c.   means for sending the real-time transport protocol data packets from a transmitting device to a receiving device **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated)**

Kanehara disclose all the subject matter of the claimed invention with the exception of:

• over a non-isochronous compliant network.

Saito the same or similar fields of endeavor teaches the use of public network

such as internet, and the ATM network exists between them **(see Saito col. 12 lines**

28-32 and col. 18 lines 50-55, and col. 19 line 64 ATM network). Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention to use the

ATM network exists between transmitting and receiving terminals as taught by Saito in

the packet processing apparatus, and packet processing method of Kanehara in order

to provide connection for communication units for inter-connected networks **(see Saito**

col. 9 lines17-29).

Regarding claims 16-25 and 27-28, Kanehara and Saito disclose all the

limitations as discussed in the rejection of claims 1-11 and 13-14 and are therefore

apparatus claims 16-25 and 27-28 are rejected using the same rationales.

Regarding claim 29, Kanehara teaches apparatus to communicate data

streams, the apparatus comprising:

- a transmitting circuit configured to encapsulate one or more first

  isochronous data packets according to a real-time transport protocol **(see**

  figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet

  processor and paragraph 56 and 38), thereby forming a first real-time

  transport protocol data packet, and to transmit the first real-time transport

  protocol data packets **(see paragraph 72 and 73 where it is determined**

  that the asynchronous packet or the isochronous packet is to be

  generated) a receiving circuit configured to receive a second real-time

transport protocol data packet **(see figure 1 box 110 IEEE1394 packet receiver and box 108 IP packet extractor)**, and to de-encapsulate the received second real-time transport protocol data packets into one or more second isochronous data packets **(see paragraph 44)**.

Kanehara disclose all the subject matter of the claimed invention with the exception of:

- over a non-isochronous compliant network; and

- from the non-isochronous compliant network

Saito the same or similar fields of endeavor teaches the use of public network such as internet, and the ATM network exists between them **(see Saito col. 12 lines 28-32 and col. 18 lines 50-55, and col. 19 line 64 ATM network)**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ATM network exists between transmitting and receiving terminals as taught by Saito in the packet processing apparatus, and packet processing method of Kanehara in order to provide connection for communication units for inter-connected networks **(see Saito col. 9 lines17-29)**.

Regarding claims 30-35, 37, and 41-42, Kanehara discloses all the limitations as discussed in the rejection of claims 16-17, 22-25, and 27-28 and are therefore claims 30-35, 37, and 41-42 are rejected using the same rationales.

Regarding claim 38, Kanehara teaches the transmitting circuit is further

configured to packetize one or more data streams into the one or more isochronous

data packets (see paragraph 56 line 1-3 and figure 1 box 102 IEEE1394 packet

processor).

Regarding claim 39, Kanehara teaches the transmitting circuit is further

configured to receive the one or more isochronous data packets from another device

(see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet

processor).

Regarding claim 40, Kanehara teaches the receiving circuit is further configured

to parse the one or more isochronous data packets from each received real-time

transport protocol data packet (see figure 1 box 110 IEEE1394 packet receiver and

box 108 IP packet extractor).

Regarding claim 43, Kanehara a network of devices to communicate data

streams, the network of devices comprising:

a.   a transmitting device configured to encapsulate one or more

        isochronous data packets according to a real-time transport protocol,

        thereby forming a real-time transport protocol data packet, and to

        transmit the real-time transport protocol data packets (see figure 1 box

        109 IEEE1394 packet transmitter and box 102 IP packet processor

        and paragraph 56 and 38);

b.   a first isochronous compliant network coupled to the transmitting device **(see figure 1 box 109 IEEE1394 packet transmitter)**;

c.   a receiving device configured to receive the real-time transport protocol data packets **(see figure 1 box 110 IEEE1394 packet receiver)**;

d.   a second isochronous compliant network coupled to the receiving device **(see paragraph 28 and figure 2 box 204 gateway)**; and

e.   a network coupled to the first isochronous compliant network and the second isochronous compliant network to transmit the real-time transport protocol data packets from the transmitting device to the receiving device **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both transmitting and receiving devices couple to first and second isochronous compliant networks)**.

Kanehara disclose all the subject matter of the claimed invention with the exception of:

- a non-isochronous compliant network coupled to the receiving device; and

Saito the same or similar fields of endeavor teaches the use of public network such as internet, and the ATM network exists between them **(see Saito col. 12 lines**

28-32 and col. 18 lines 50-55, and col. 19 line 64 ATM network). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ATM network exists between transmitting and receiving terminals as taught by Saito in the packet processing apparatus, and packet processing method of Kanehara in order to provide connection for communication units for inter-connected networks **(see Saito col. 9 lines17-29)**.

Regarding claims 44-50 and 52, Kanehara discloses all the limitations as discussed in the rejection of claims 17, 19-20, 22-25, and 27-28 and are therefore claims 44-50 and 52 are rejected using the same rationales.

Regarding claim 53, Kanehara teaches the transmitting device is further configured to packetize one or more data streams into the one or more isochronous data packets **(see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet processor and paragraph 56 and 38)**.

Regarding claim 54, Kanehara teaches the transmitting device is further configured to receive the one or more isochronous data packets from another device **(see figure 1 box 109 IEEE1394 packet transmitter)**.

Regarding claim 55, Kanehara teaches the receiving device is further configured to parse the one or more isochronous data packets from each received real-time transport protocol data packet **(see figure 1 box 110 IEEE1394 packet receiver and box 108 IP Packet extractor and paragraph 44)**.

Regarding claim 56, Kanehara teaches each received real-time transport protocol data packet includes at least a portion of an isochronous cycle record **(see figure 7 box 710 time count)**.

Regarding claim 57, Kanehara teaches each isochronous cycle record comprises zero or more isochronous data packets **(see paragraph 83 line 6)**.

Regarding claim 58, Kanehara teaches a method of communicating data streams, the method comprising:

a.   packetizing one or more data streams into IEEE 1394 compliant isochronous data packets **(see paragraph 17 line 10)**;

b.   encapsulating one or more IEEE 1394 compliant isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet **(see paragraph 17 line 10 and paragraph 38)**; and

c.   sending the real-time transport protocol data packets from a transmitting device to a receiving device **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated)** over

Kanehara disclose all the subject matter of the claimed invention with the exception of:

- over a non-isochronous compliant network.

Saito the same or similar fields of endeavor teaches the use of public network

such as internet, and the ATM network exists between them **(see Saito col. 12 lines**

28-32 and col. 18 lines 50-55, and col. 19 line 64 ATM network). Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention to use the

ATM network exists between transmitting and receiving terminals as taught by Saito in

the packet processing apparatus, and packet processing method of Kanehara in order

to provide connection for communication units for inter-connected networks **(see Saito**

col. 9 lines17-29).

Regarding claim 59, Kanehara teaches the transmitting device is coupled to a

first IEEE 1394 compliant bus architecture and the receiving device is coupled to a

second IEEE 1394 compliant bus architecture **(see figure 2 IEEE 1394 bus and**

ref206).

Regarding claims 60-65, 67, and 69, Kanehara discloses all the limitations as

discussed in the rejection of claims 5-10 and 13-14 and are therefore claims 60-65, 67,

and 69 are rejected using the same rationales.

Regarding claim 68, Kanehara teaches further comprising parsing the one or

more IEEE 1394 compliant isochronous data packets from each real-time transport

protocol data packet received by the receiving device **(see figure 1 box 110 IEEE1394**

packet receiver and box 108 IP packet extractor and paragraph 42 and 44).

Regarding claims 12, 26, 36, 51, and 66, Kanehara discloses all the subject

matter of the claimed invention with the exception of each IEEE 1394 isochronous data

packet includes an IEEE 1394 data payload formatted according to an IEC 61883-1

compliant Common Isochronous Protocol (CIP).

Saito et al. from the same or similar fields of endeavor teaches the use of

encapsulation of the IEC 61883 **(see Saito et al. column 38 line 2)**. Thus, it would

have been obvious to one of ordinary skill in the art at the time of the invention to use

the encapsulation of the IEC 61883 as taught by Saito et al in the packet processing

apparatus, and packet processing method of Kanehara in order tot provide necessary

rules and guidelines for transmitting data **(see Saito column 38 line 5-10 and column

39 line 3-12)**.

Response to Arguments

4.   Applicant's arguments with respect to claims 1, 15, 29, 43, and 58 have been

considered but are moot in view of the new ground(s) of rejection.

5.   Applicant's arguments, see applicants remark on page 13, filed 10/21/2007, with

respect to drawing objection have been fully considered and are persuasive. The

objection of drawing regarding figure 3 has been withdrawn.

6.   Applicant's arguments, see applicants remark on page 13, filed 10/21/2007, with

respect to specification objection have been fully considered and are persuasive. The

objection of title has been withdrawn.

7.   Applicant's arguments, see applicants remark on page 13, filed 10/21/2007, with

respect to claim objection have been fully considered and are persuasive. The

objection of claim 13 has been withdrawn.

8.   Applicant's arguments, see applicants remark on page 13, filed 10/21/2007, with

respect to 112 2nd reject have been fully considered and are persuasive. The 112 2nd

rejection of claims 7, 21, and 62 has been withdrawn.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Roy (US6831899) disclose voice and video/image conferencing services over the IP

network with asynchronous transmission of audio and video/images integrating loosely

coupled devices in the home network.

Jalonen (US2006/0173921) disclose system and method for data transmission and

reception

Ben-Dor et al. (US2002/0141418) disclose tunneling between a bus and a network.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wutchung Chu whose telephone number is 571 270

1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edan D. Orgad can be reached on 571 272 7884. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
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